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MEETING HOUSE ESSAYS



CHERUBIM OF GOLD

Building Materials and Aesthetics

Peter E. Smith



Liturgy Training Publications

ACKNOWLEDGMENTS

Meeting House Essays was designed by Carolyn Riege and Kerry Perlmutter, assisted by Sally Adamowicz, and typeset in Goudy Old Style by James Melody-Pizzato. Sarah Huck, Jerry Reedy and Victoria M. Tufano assisted the editor, David Philippart.

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ISBN 0-929650-82-4

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INTRODUCTION

It has been a thousand years since Grand Prince Vladimir of Kiev sent emissaries throughout the world in search of an acceptable religion. Of all that they saw and heard, no experience could compare with the liturgy of Byzantium and its splendid churches, especially Hagia Sophia. "We knew not whether we were in heaven or on earth," they recounted to the prince. "We only know that God dwells there among men and women, and their service is fairer than the ceremonies of other nations. For we cannot forget that beauty." Having tasted the sweetness of Byzantium, the Kievans rejected the bitterness they found in other faiths.

In *Cherubim of Gold* Peter Smith brings us a message at once bitter and sweet. Smith urges us to reconsider the meaning and use of quality natural materials—marble, limestone, terra cotta, brick, gold leaf and oak among others—in the building of churches. When misused, such materials can detract from Christian celebration by their contemporary association with opulence. Replacing such materials with laminates or other synthetic materials causes a loss of that precious beauty that is so much a part of worship. Thus the Christian assembly may forget its role in God's creation and lose sight of its harmony with nature.

The bitter reality of modern life lived in prefabricated structures made of shoddy materials, however, can be ameliorated

somewhat when a community decides to build a place for worship with the classic, natural materials. Smith argues convincingly that the quality materials, used in moderation and with restraint, can uplift the worshiping community and bring about a rediscovery of its oneness with God and the created universe.

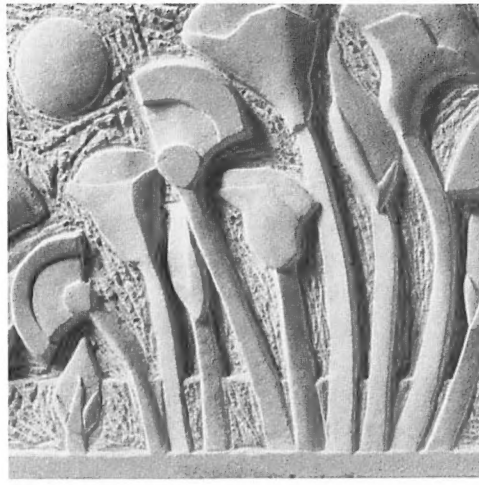
"I believe in churches." So reads a plaque prominently displayed in a Chicago church and quoting the words of a significant benefactor. One wonders whether this person has placed an exaggerated accent on the externals of worship. No such imbalance exists in Smith's essay. Enhancing his aesthetic sensitivity is a profound theological vision and a keen liturgical awareness—all informed with common sense.

Smith's vision is decidedly sacramental. Materials mirror the symbolic structure of human life. Marble and limestone, terra cotta and brick point beyond themselves to a God invisibly present. Through our senses we encounter the divine in a human way. The unity and harmony of the well-constructed church building signify the unity of the Christian assembly. The community's gifts and the gifts of this special place made of glorious materials become one. Contemplation of this reality leads to authentic Christian celebration and a thanksgiving for all the gifts that God has given us.

The artist's sensitivities never divorce Smith from the community at worship. On the contrary, Smith urges the creation of *hospitable* sacred places, places where everyone becomes involved in a common life. The making of the furnishings and art for St. David the King Church, told in this essay, illustrates the point: The hands of children probing stone sculptures, the fingers of adults wielding brushes to add layers of paint to sacred images, the shoulders of others carrying in the marble mensa of the community's altar all make for the building of a living church. The entire parish community, drawn together in the noble act of creating a church building, truly becomes an image of its very Creator.

When the Christian assembly gathers in the memory of Jesus, it encounters God in the present time and space and also looks forward to the new creation. Shaping and interpreting that encounter, however subtly, and giving a glimpse of what that new creation may look like, are the architecture and art that enfold the assembly. How wonderful it would be if more Christians leaving their places of worship could honestly echo the words of Vladimir's emissaries: "We cannot forget that beauty."

James M. McCann, SJ



Underlying and preceding form and color in any work of art is the raw material that the artist has chosen with infinite care, knowing that it brings to the work levels of meaning impossible to achieve otherwise. In fact, there are many works of ancient art whose significance we cannot decipher, but whose substance speaks to us across the centuries, telling us about humanity's place in the imponderable beauty and unity of the universe. These are the natural, classical materials of art and architecture: marble, granite, limestone, slate, alabaster, cedar, oak, walnut, gold and terra cotta.

These materials are not merely functional; they have the power to inspire us, to move us into another realm. Georges Duby, in his book on medieval art, quotes the twelfth-century Abbot Suger of Saint-Denis: "For by way of material beauties the mind is elevated to true Beauty and by the light of its splendors, raised up from the earth in which it lay buried, and enters into heaven."¹

The American philosopher George Santayana made the same point in a slightly different way nearly a century ago:

Form cannot be form of nothing. If, then, in finding or creating beauty, we ignore the materials of things, and attend only to their form, we miss an ever-present opportunity to heighten our effects. For whatever delight the form may bring, the material might have given delight already. . . . There is no effect of form

which an effect of material could not enhance, and this effect of material, underlying that of form, raises the latter to a higher power and gives the beauty of the object a certain poignancy, thoroughness, and infinity which it otherwise would have lacked. The Parthenon not in marble, the king's crown not of gold, and the stars not of fire, would be feeble and prosaic things. The greater hold which material beauty has upon the senses, stimulates us here, where the form is also sublime, and lifts and intensifies our emotions. We need this stimulus if our perceptions are to reach the highest pitch of strength and acuteness . . . The beauty of material is thus the groundwork of all higher beauty . . .²

In a church building, unity of design—the very essence of beauty—is crucial. Beauty ennobles the assembly and helps create the atmosphere of mystery and reverence necessary for the liturgy. Unity of design not only proclaims that the people belong in that church, but reaffirms their place in the universe as well. The poor quality of materials used in many new church buildings today seriously compromises efforts to create unified designs.

For a thousand years the Western church was very much at the center of creativity and innovation in the arts. Church buildings were designed and decorated by the masters of architecture and art. We have moved so far from this tradition today that we can be overwhelmed with a sense of loss when we enter many new church buildings. Our art is an image of ourselves. What do we say about our community and our God when we build churches with inferior materials and fill them with imitation art?

The physical materials of the place for worship are the liturgy's skin and bones. They must heighten the action of the liturgy, which requires a sense of transcendence as well as an atmosphere of hospitality. The classic, natural materials we have mentioned do this far better than synthetic, mass-produced materials can, and they are, therefore, the most appropriate for use in church design. There are at least four reasons for this. First, the beauty of the classic materials invites contemplation. Second, their naturalness reveals God and reestablishes contact with creation for contemporary men and women. Third, they are significant symbols. Fourth, they have biblical precedents.

In this essay I will explore these four reasons and explain some practical advantages for using the classic materials. I will then discuss why the classic materials are used less today, and how they may be used most effectively in a contemporary idiom. Finally, I will describe some of the technical and aesthetic qualities of a few of the classic, natural building materials.



A building's materials are not only functional; they have the power to inspire us. Temple of Poseidon (circa 450 BCE), Paestum, Italy.

Photo: Peter E. Smith



In a church building, unity of design is essential. Romanesque ambo (10th century), Church of St. John the Baptist, Guiglia (Modena) Italy.

Photo: Peter E. Smith

BEAUTY INVITES CONTEMPLATION

The United States bishops, in *Environment and Art in Catholic Worship*, clearly set beauty as the standard when creating a place for worship:

Liturgy's climate is one of awe, mystery, wonder, reverence, thanksgiving and praise. . . . It cannot be satisfied with anything less than the beautiful. . . . Where there is evidently no care for this, there is an environment basically unfriendly to mystery and awe. . . .³

In describing the appropriate materials to use for liturgical furnishings, *Environment and Art in Catholic Worship* uses words such as solid, noble, fine, simple, harmonious, attractive, beautiful, impressive. Obviously, natural materials embody this aesthetic and more readily contribute to achieving the standard of beauty that liturgy requires than do plastics and laminates.

The beauty of the classical, natural materials predisposes the assembly to participate in the liturgy. It invites the assembly to contemplate God's artistry and then to respond to it. Here's how Augustine described the way that natural beauty leads one to contemplate God:

And what is this God? I asked the earth and it answered: ". . . I am not [God]"; and all the things that are in the earth made the same confession. I asked the sea and the deeps and the creeping things, and they answered: "We are not your God; seek higher." I asked the winds that blow, and the whole air with all that is in it answered: "I am not God." I asked the heavens, the sun, the moon, the stars, and they answered: "Neither are we God whom you seek." And I said to all the things that throng about the gateways of the senses: "Tell me of my God . . ." And they cried out in a great voice: "[God] made us." My question was my gazing upon them, and their answer was their beauty.⁴

The beauty of the place of worship creates a sense of unity and harmony during the liturgy. Like the elements of nature in Augustine's experience, the beauty of natural materials such as wood, stone, glass and clay in the worship environment says, "We are not God . . . God made us . . . seek higher." Rather than draw attention to themselves, natural materials direct attention to the action of the liturgy, which completes the environment where the assembly finds God.



Liturgy's climate is one of awe, mystery and wonder. Stone sepulcher (14th century), Church of St. Francis, Urbino, Italy.

Photo: Peter E. Smith

GOD REVEALED, HUMANITY RECONCILED

From the beginning of time—until perhaps the industrial age—humanity has respected the power and mystery of nature and has made it an important part of both art and spirituality. In modern times we distance ourselves from the natural world. Where people once looked at the universe with deep reverence, we are now more interested in bending it to our will or shielding ourselves from it. This has deeply affected our sense of beauty, and it makes acceptable the impoverished materials with which we build and surround ourselves.

Medieval men and women looked to both the Bible and nature for knowledge of God. They believed that God had written two books, the Bible and the “book” of nature. Symbols of nature are seen throughout medieval art, both in the architecture of the churches and in their ornamentation. In *History of Medieval Art* Georges Duby writes:

The medieval artist aimed at clarifying two great mysteries: the realm of nature and the text of Holy Scripture. . . . Since it was God who created the universe perceived by our senses there exists an identity of substance between the Almighty and his creature. . . . Thus it is possible to discern God by contemplating the world he has made. . . . The whole creation bears constant witness to the divine purpose and tells us all we need to know. . . . Art was, in fact, a discourse on God, as were music and the liturgy . . . bringing to

light the basic values immanent in nature and in the often perplexing text of the scriptures.⁵

The artist did this not only by depicting nature, but also by using the best of natural materials.

Modern urban lives are often bereft of contact with the natural world, its rhythms and harmony. The design of new church buildings and the judicious use of the classical, natural materials in them may provide modern men and women with at least some contact with nature, along with a sense of its rhythm and harmony. But harmony is not so easily perceived in most modern churches, nor is the experience of mystery and tradition. How can it be otherwise in rooms built of imitation materials and filled with mass-produced art?

The natural beauty of the classic materials in places for worship can help to reconcile people and nature. In the words of Santayana:

We are not ourselves independent of this world in which we live. We sprang from it, and our relations in it determine all our instincts and satisfactions. This final questioning and sense of mystery is an unsatisfied craving which nature has her way of stilling. . . . Beauty is a pledge of the possible conformity between the soul and nature, and consequently a ground of faith in the supremacy of the good.⁶

SYMBOLISM OF THE CLASSIC MATERIALS

The classic, natural materials are not just lifeless commodities, but significant symbols. Limestone—composed of the remains of plants and animals—is an important symbol of life. Terra cotta, a form of clay referred to in the Bible (see Jeremiah 18:6 and Romans 9:20–24, for example), is literally earth transformed by human hands into art. The clay pot is a biblical symbol for the human body; in Genesis 2 God creates Adam from the ground on the bank of a river. Gold is a symbol of pure light where God abides. It is also the best approximation that the material world makes of heaven's brilliance. The heavenly Jerusalem described in Revelation 21:18 "was pure gold, like unto clear glass."

Though they come from the earth, the classic materials, by virtue of their beauty, point to heaven. Shaped by architect and artist, these materials celebrate the wedding of earth to heaven achieved by Christ's incarnation. Wonderful examples of this aesthetic are prevalent in the architecture of Byzantine churches, particularly in the Hagia Sophia:

The Byzantine church was itself a representation of the divine mysteries on earth. . . . The very materials



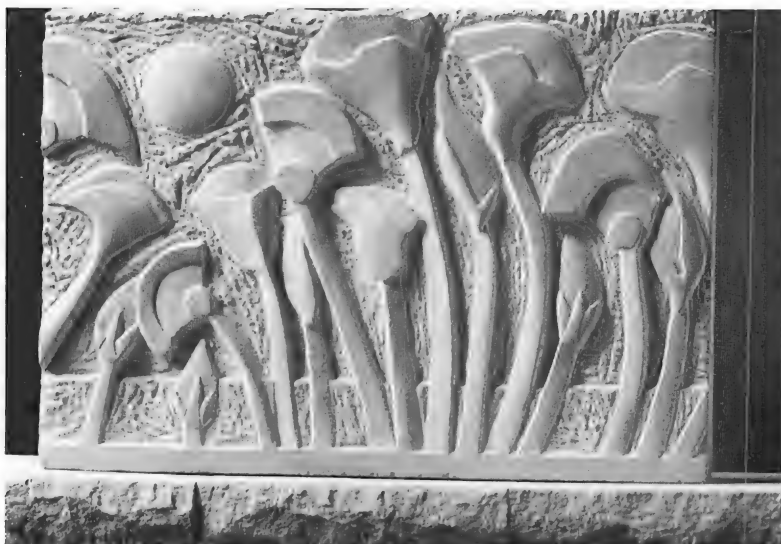
Beauty is a pledge of the possible conformity between the soul and nature. Relief carving on stone column (10th century), Church of St. John the Baptist, Guiglia (Modena) Italy.

Photo: Peter E. Smith



Relief carving on stone column (11th–14th centuries), Fiesole cathedral, Italy.

Photo: Peter E. Smith



Limestone—composed of the remains of plants and animals—is an important symbol of life. "Luce Chi-ara," limestone panel (1990) by Peter E. Smith. Photo: Peter E. Smith



Though they come from the earth, the classic materials shaped by the artist point to heaven. "Asperges Me Hyssopo," limestone carving (1991) by Peter E. Smith. Photo: Peter E. Smith

of the structure were intended to suggest a transfiguration of the world. . . . The decorative devices, the mosaics and the icons, were not in fact merely decorative: They were the actual and real embodiments of spiritual truths. . . . The very materials [of Hagia Sophia] seem to radiate the majesty of God. Here, indeed, is the substance of the earth itself disclosing its divine purpose . . . and the earth itself is seen to be the throne of Christ.⁷

Finally, the renewed emphasis today on using more fully the natural symbols of water, oil, bread and wine in the liturgy calls for a parallel in the selection of building materials. If the liturgy emphasizes the natural qualities and the traditional use of these important symbols, we ought do no less when we select the materials to build our places of worship.

BIBLICAL PRECEDENTS

In Exodus 25–26, God clearly specifies that fine materials are to be used in the building and furnishing of the ark: acacia wood, gold, linen, silver. The artist's desire and responsibility to use only the finest materials is not a whim but divine inspiration.

In Exodus 31:1–7, the Lord speaks to Moses of the artist Bezalel:

I have called by name Bezalel, son of Uri, son of Hur, of the tribe of Judah; and I have filled him with divine spirit, with ability, intelligence, and knowledge in every craft, to devise artistic designs, to work in gold, silver, and bronze, in cutting stones for setting, and in carving wood, in every kind of craft.

Since those earliest days in the desert, where eking out an existence must have been difficult, the finest materials have been found and used for the building and furnishing of places of worship. This was so not because of some misguided desire to be extravagant or ostentatious, but because people sensed the importance of the place for worship. When the Israelites heard God commanding them to build of pure gold a mercy seat on top of the ark, and to station two hammered gold cherubim on either side of it, they were not simply indulging an aesthetic whim. They knew without a doubt that their gathering around that ark and mercy seat was the essence of their communal life. God tells them: "There I will meet with you, and from above the mercy seat on the top of the ark, from between the two cherubim that are on the ark of the covenant, I will deliver to you all my commands" (Exodus 25:22).



From the biblical ark to a contemporary tabernacle, the finest materials have been used in places of worship. Painted and gilt-birch tabernacle, limestone base (1991) by Peter E. Smith. Church of St. David the King, Princeton Junction, New Jersey.

Photo: Peter E. Smith

REGIONAL AESTHETICS

Because they are mass-produced and mass-marketed, synthetic building materials embody a generic aesthetic. A plastic laminate altar in Albuquerque could be a plastic laminate altar in New York, but in neither case does the material reveal anything about the locale or the people who live there. Using materials that are not only natural, but also indigenous to the area, affords worshipers an opportunity to cultivate a sense of pride and accomplishment in their church. The people of Minnesota are quick to point out the use of local granite in many of their buildings. The same response is evoked by limestone in Indiana and pietra serena in Florence. The buildings are made from the very substance of local tradition and culture.

Good artists and architects have always advocated this. Frank Lloyd Wright, in designing "Falling Water" (Kaufmann House), encouraged the use of stone from a nearby quarry. Le Corbusier, in his chapel at Ronchamp, mixed new materials with indigenous stone and wood.⁸

WHY ARE CLASSIC MATERIALS USED LESS TODAY?

Many factors contribute to the paucity of natural materials—especially the classic ones—in contemporary church design. One of the most obvious is the general perception that natural

materials—such as marble—are too expensive and difficult to procure. Some designers reject the classic materials, believing that any material associated with the past or with European design is not appropriate today.

Another reason fine materials are infrequently used in contemporary liturgical design is their association with excess and extravagance. There is a misconception that if we want a good material we must have it everywhere. Yet there is nothing more cold and unattractive than the excessive use of marble to create an atmosphere of opulence, as is often done in department stores and casinos. Unfortunately, our experience of the classical materials—and the experience of many parish building committees—is often limited to such secular settings. It is hardly surprising then that these materials are either avoided or used inappropriately in church design.

The process of choosing art and furnishings for a church building can, in itself, militate against the use of quality materials. In the past, the artistic program of a church project was thoroughly developed in the early planning stages by the master builder, the architect and the artists, all working closely with one another. This was necessary because art was an integral part of the architecture. The more common practice today is to design the building first, saving consideration of the furnishings until the latter stages of the project, at which point—with the building nearing completion—time, money and enthusiasm for the project may be running out. Thus the artistic program either suffers or is eliminated as an unaffordable extra. In place of art, catalog furnishings made of laminates, fiberglass and other synthetic materials are used.

AVAILABILITY AND AFFORDABILITY

People in the late twentieth century spend less on religious buildings than their grandparents did even a few years ago—and dramatically less than their ancestors did in the distant past. The Great Pyramid took over a quarter century to build and cost more than \$800 billion (in today's money). The people of Chartres, who numbered only 10,000, built one of the great cathedrals of all time in about 30 years for several hundred million dollars (in today's money).⁹

Even though we spend considerably less today on our places for worship, we nevertheless must find creative ways to design, build and furnish those places with quality materials. Only in this way can we create meaningful structures that embody tradition and the life of the community. It is not acceptable to build



Shaping the classic materials into contemporary forms results in beauty. Altar, limestone base with carvings and marble mensa (1991–1992) by Peter E. Smith. Church of St. David the King, Princeton Junction, New Jersey.

Photo: Peter E. Smith

with cheap materials or to decorate with art reproductions just to get the job done. Suppliers of natural, classical materials are not difficult to find. One of the easiest ways to locate them is through the architects, builders, designers and artists who have used these materials.

Classic materials are affordable if they are used the way they should be—in moderation. As noted earlier, it would be highly undesirable to cover the whole interior of a church in marble, not only for financial reasons but for aesthetic reasons as well. Using classical materials judiciously, a parish can furnish a church interior for about the same amount of money that mass-produced items would cost. For example, at St. David the King Church in Princeton Junction, New Jersey (built 1991), all of the furnishings were handmade, using the finest materials, yet expenses were kept within a moderate budget. A moderate budget for the furnishings of a 650-seat church falls somewhere in the range of \$50,000 to \$125,000 or about two to three percent of the total project cost.

When you consider the greater durability of the classic materials, using inferior materials to finish an interior or to make furnishings offers no long-term savings. Carpeting, ostensibly used to save money, often needs to be replaced in five or ten years. Floor material such as slate, though, more than compensates for its higher initial cost with its much greater longevity. Slate also has acoustical and aesthetic advantages over carpeting. In this case, the natural material is clearly the more appropriate choice.

By far the best way to minimize the cost of good materials for furnishings is to deal directly with the artist and to bring that artist into the design process early, ideally at the same time the architect is hired. If the artist is commissioned directly by the church, there should be an automatic savings over ordering through a third party with its additional mark-up, as is usually the case when a church is furnished with mass-produced items. Costs can be further reduced if the artist selects materials that are available locally.

Dealing directly with the artist also facilitates good design because communication is direct, not filtered through a third party. The more direct input the artist receives—from the community, the pastor and the architect—the more likely he or she is to produce the desired results. In my last two projects, I worked directly with the pastor and the architect in one case and with the building committee in the other. The cost savings were substantial, and the direct communication and synergy that developed were greatly responsible for the success of each project.

USES IN CONTEMPORARY DESIGN

If we understand why certain places for worship evoke the divine better than others, we will have a good idea of the challenges that await modern designers. When we walk into Chartres or Venice's San Marco, the aura of mystery that the designers have created is palpable. Their work, organized in a unified, harmonious whole, invites us to stay, to pause, to think, to tremble in God's presence.

Can we achieve the same result when we build contemporary places of worship? Yes, but it is not just a matter of buying fine materials. A key to the modern use of the classic materials is restraint and moderation. Our modern sensibility admires simplicity. Excessive use of any one material or the confused mixing together of many different kinds of materials can have unfortunate results. Conversely, if we can successfully combine richness with starkness, we can create environments that are highly effective. We can accomplish this, in part, by learning from the past.



The effective use of contrast in design is a prime characteristic of Romanesque architecture. Stone carving (10th century), Church of St. John the Baptist, Guiglia (Modena) Italy.

Photo: Peter E. Smith

The great Romanesque churches succeeded extraordinarily well in creating a sense of mystery and unity. Also, their aesthetic resonates very well with modern sensibilities. The effective use of contrast is a prime characteristic of Romanesque architecture and art, which balances the subdued with the spectacular. A contemporary application of this principle would be to contrast the plainness of sheetrock or concrete walls with the richness of marble or gold leaf in furnishings or works of art.

We need to use the classical materials to create *new* forms rather than copies of old ones. The classical materials evoke the past by their mere presence; it is therefore redundant to use them to copy old forms. Instead, we need to use classic materials to create modern shapes, thereby evoking the divine in a fresh way and establishing a climate of hospitality for the contemporary assembly. This is far preferable to the common practice of simply copying old forms, a weakness in many modern churches.



We need to use the classic materials to create new forms rather than copies of old ones. Ambry, pietra serena and wood (circa 12th century), Florence, Italy.

Photo: Peter E. Smith



Ambry, marble, glass and gilt-wood (1991) by Peter E. Smith. Church of St. David the King, Princeton Junction, New Jersey.

Photo: Peter E. Smith

OPPORTUNITY FOR COMMUNITY INVOLVEMENT

A great tradition that has been lost for several generations in many areas is the active participation of the community in the church building process. Though parishioners are usually involved in design and cost management, they participate far less frequently in the actual work of erecting the building and creating the art. We would achieve a better sense of the place of worship as a symbol of the community if the parishioners could sit in their church and remember, for example, that they moved into place the stone that became part of the font or that they helped with the painting of an icon or fresco.

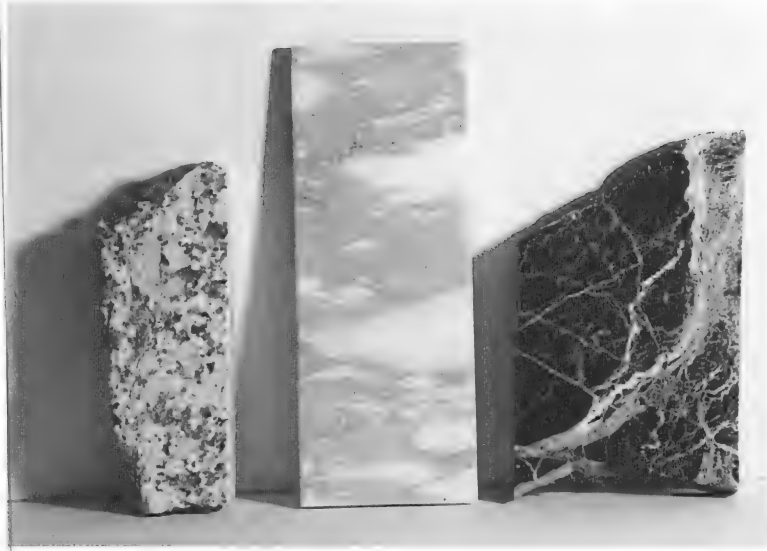
Natural materials, which are a joy to touch and require more hands-on care than synthetic materials, encourage community participation. I found this to be true in designing and creating the furnishings and works of art at the Church of Saint David the King in Princeton Junction, New Jersey. Parishioners moved by hand the massive marbles of the mensa and the baptismal font. Some came to the studio to paint parts of the crucifix and apply gold tesserae on the mosaic image of the Virgin. Others helped to carry the images and install them. The children and young adults of the community acquired a sense of ownership and involvement by observing work being done on the sculptures.

CHARACTERISTICS OF THE CLASSIC MATERIALS

A few of the aesthetic and technical characteristics of a representative selection of the classical materials are described below. Modern culture is unfamiliar with many of the classic materials, but none more so than stone. Let us begin, then, with the most important stones of art history: marble, granite and limestone.

Marble. Many of the great masterpieces of sculpture and liturgical art are made of marble, and rightly so. Marble is elegant, timeless, majestic and sophisticated; its ability to take a high shine creates an impression of great depth. Marble is found in a wide range of colors—from the snowy purity of statuary carrara marble to the dramatically veined alpine greens.

Granite. Less dramatic than marble, but much harder, granite is almost impervious to scratching and staining. Its hardness makes it more difficult to work with than marble, as well as more difficult to quarry and cut. Until new cutting technology was developed, the cost of granite was about twice that of marble. With the advent of new cutting technology, the cost of granite has come down considerably. The cost now ranges from about the same as that of marble up to about 40 percent higher.



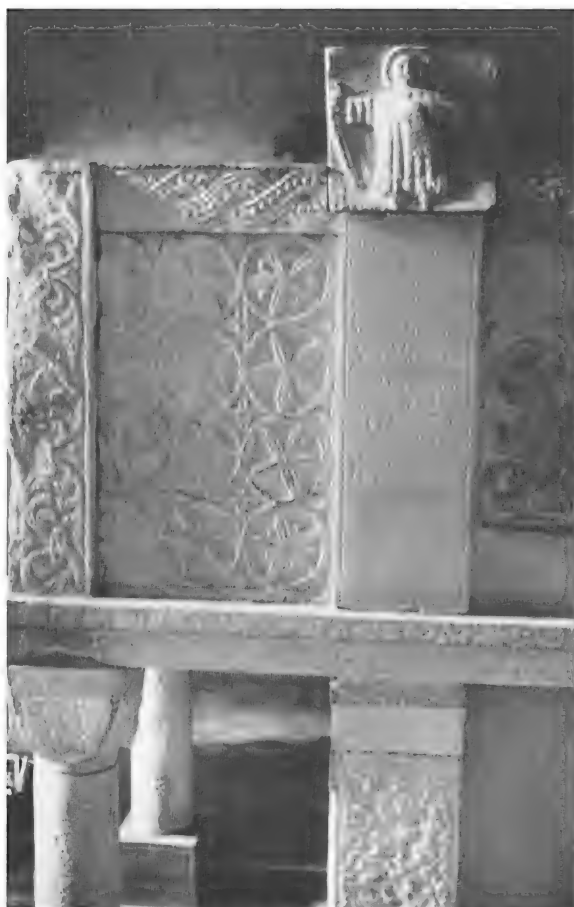
Granite (left) typically has a granular or speckled surface, while marble (center and right) is known for its dramatic veins.

Photo: Peter E. Smith

Limestone. The workhorse of all the stones, historically, has been limestone. It was used to build everything from the Sphinx to many of the great churches of Europe. Softer, more consistent, and about one-third the cost of marble, limestone, is an ideal building and sculpting material. It is not polished, but used with its sawed or chiseled natural surface exposed, producing an effect of warmth and frankness. Limestone with its rougher surface, creates desirable textural variety, especially when used in combination with marble, brick or concrete. (This combination of limestone with brick or concrete is very common in American architecture.)

An aside about concrete: Although we think of it as unequivocally modern, concrete was used quite effectively in Roman times. Some of the most ancient and modern innovations in architecture have been made of this material.

Terra cotta. Fired clays, terra cotta among them, have a long and venerable history in biblical and church art. Terra cotta means "cooked earth," which it literally is. The clay is fired to approximately 2000 degrees Fahrenheit. The characteristic red color and warm, natural look come from the iron in the clay. In the history of church architecture terra cotta has had many uses, including relief sculpture, sacred vessels and floor tiles. Extremely durable, it has been used in some of the oldest works of art extant. Although often seen in unglazed form, it more commonly is glazed to create surface patterns and decorations. Glazing also is necessary when the object will be used with liquids, as in the case of liturgical vessels.



This 10th-century marble ambo shows the variety of surface textures created by the artists. Church of St. John the Baptist, Guiglia (Modena) Italy.
Photo: Peter E. Smith

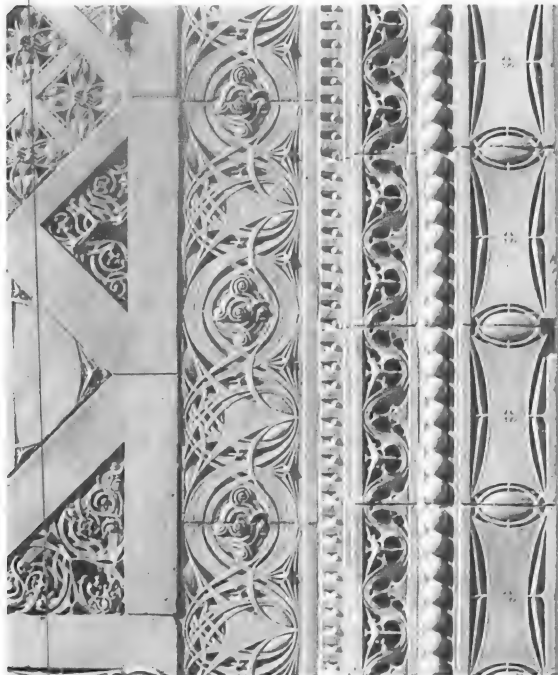


Detail of the ambo above.
Photo: Peter E. Smith



Extremely durable, terra cotta has been used in some of the oldest works of art extant. Ancient Greek vase, glazed terra cotta. Collection of Pietro Designs, Princeton Junction, New Jersey.

Photo: Peter E. Smith



Terra cotta is suitable for outdoor art work. A terra cotta tile from the Prudential (Guaranty) Building (built 1895, Louis Sullivan, architect), Buffalo, New York.

Photo: Gilbert Schulenberg, Jr.



The facade of the Romanesque cathedral (11th–13th centuries) in Modena, Italy, combines two of the classic materials: stone and brick.
Photo: Peter E. Smith

Terra cotta is one of the few artistic materials that can be recommended for outdoor art works. If fired to a high temperature, it is impervious to the airborne pollutants that plague marble and other materials. Pollution can soil terra cotta, but routine cleaning restores it to its original luster. Terra cotta has been used in particularly effective ways on the exteriors of buildings in the United States. Some good examples are the bas-relief tiles that cover Louis Sullivan's buildings.

Brick. Another form of fired clay is brick. It is one of the few classic materials still used extensively in churches today. Buildings made of brick convey strength, reliability and warmth, attributes that make brick ideal for liturgical furnishings such as the altar and ambo. It is extremely durable, and it is normally red, owing to the iron in the clay. The higher the firing temperature, the darker it becomes.¹⁰

The color of the mortar is an extremely important aesthetic decision when using brick. Ronald Brunskill and Alec Clifton-Taylor, authors of *Brickwork*, offer this advice about mortar:



The tools and materials of the gilder: 23K Italian gold leaf (thinness of 0.00003 inches) on a leather cutting pad with a smooth-edged gilder's knife.

Photo: Peter E. Smith

It should be lighter in tone than the bricks. . . . On the other hand, an excessively light tone is also to be avoided because, as with very dark mortar, the effect is to over-emphasize the individual bricks at the expense of the whole wall, with inevitable loss of scale and dignity. Mortar . . . should be reticent and not draw attention to itself.¹¹

Brick has been used effectively in church design for centuries. Interior brick walls created the warm texture in Romanesque churches, and continue to do so in modern churches. Brunskill and Clifton-Taylor claim that brick, especially when used in smaller buildings, is “. . . the most human building material and often the best.”¹²

Gold leaf. As the name implies, gold leaf is a leaf or sheet of gold (22K–24K). The leaves are created by beating the gold to an extreme thinness. The gilder then carefully cuts the leaves and puts them into place on the item or material to be gilt, which has first been covered with a glue or size. Because the leaves are so thin and delicate, this takes great skill. After the last leaf is placed on the sized surface, the gold can be either brushed or burnished.

Just about anything can be gilt, from paintings to statues to roofs. Wood has always been the most receptive material for gilding, but gold leaf can also work effectively with stone and terra cotta. Also, it may be safely used outside.

Gold leaf should always be used with restraint. In the history of the church, it is most commonly associated with illuminations

and panel painting. Perhaps the most elegant use of gold leaf in the past was the gilding of Renaissance crucifixes and altarpieces.

The term gold leaf is used loosely today, often referring to objects that merely appear to be gilt. True gold leaf has a richness and depth that can come only from real gold, and to the trained eye, substitutions are obvious.

CONCLUSION

The design and construction of church buildings is both a tremendous responsibility and a tremendous challenge. We must regain a sense of the building—a symbol of the holy assembly itself—as a work of art. There is no middle course. Halfway attempts at art fail dismally. As Henry Adams put it, “. . . religious art is the measure of human depth and sincerity; any triviality, any weakness cries aloud.”¹³

The most difficult challenge is to translate the art and architecture of the church into an idiom that is fully contemporary, yet rooted in the tradition of mystery and hospitality that is so central to Christianity. We need to ponder the lessons of the past, to consider carefully what ancient works can teach us, and then dare to risk creating designs that reflect our own time. Only then may we presume to hope that the churches we build will stand as equals with Chartres, Vézelay and Hagia Sophia, the very modern and revolutionary churches of their own ages.



"Cherubim of Gold," monotype
(1989) by Peter E. Smith.
Photo: Peter E. Smith

NOTES

1. Georges Duby, *History of Medieval Art*, vol. I (New York: Rizzoli, 1986), 201.
2. George Santayana, *The Sense of Beauty* (New York: Dover, 1955), 49, 51.
3. National Conference of Catholic Bishops, *Environment and Art In Catholic Worship* (Chicago: Liturgy Training Publications, 1986), #34.
4. *The Confessions of St. Augustine*, translated by F. J. Sheed (New York: Sheed & Ward, 1942), 177.
5. Duby, vol. I, 171, 180.
6. Santayana, 164.
7. Edward Norman, *The House of God: Church Architecture, Style and History* (New York: Thames and Hudson, Inc., 1990), 51-2, 57.
8. Albert Elsen, *Purposes of Art* (New York: Holt, Rinehart and Winston, 1967), 85, 269.
9. Elsen, 70.
10. Elsen, 48.
11. Ronald Brunskill and Alec Clifton-Taylor, *Brickwork* (New York: Van Nostrand Reinhold, 1982), 64.
12. Brunskill and Clifton-Taylor, 63.
13. Henry Adams, *Mont-Saint-Michel and Chartres* (Boston: Houghton Mifflin, 1963), 4.

FOR FURTHER REFLECTION

It is more important to respect . . . tradition . . . than to attempt to invent a new beauty without reference to that tradition. . . . But "respect for tradition" does not imply a slavish subservience to the past. "I do not see and cannot comprehend how anyone who truly reveres the great works of the past can for a moment dream of imitating them . . ."[wrote Sullivan] ". . . if your mind is lofty enough to come into a genuine companionship and communion with theirs, you will wish, through such communion, to do what they did, namely to produce—to interpret the life of your own people.

Hugh Morrison

The architects of the twelfth and thirteenth centuries took the church and the universe for truths, and tried to express them in a structure that would be final. . . . Every inch of material, up and down, from crypt to vault, from human to God, from atom to the universe, had its task, giving support where support was needed, or weight where concentration was felt, but always with the condition of showing conspicuously to the eye the great lines that led to unity and the curves that controlled divergence; so that from the cross on the flèche and the keystone of the vault, down through the ribbed nervures, the columns, the windows, to the foundation of the flying buttresses far beyond the walls, one idea controlled every line; and this is true of St. Thomas Church as it is of Amiens Cathedral. The method was the same for both, and the result was an art marked by singular unity, which endured and served its purpose until humanity changed its attitude towards the universe.

Henry Adams

Cost is practical value expressed in abstract terms, and from the price of anything we can infer what relation it has to the desires and efforts of humanity. There is no reason why cost, or the circumstances that are its basis, should not, like other practical values, heighten the tone of consciousness, and add to the pleasure with which we view an object. . . . I believe economists count among the elements of the value of an object the rarity of

its material, the labor of its manufacture, and the distance from which it is brought. Now all these qualities, if attended to in themselves, appeal greatly to the imagination. We have a natural interest in what is rare. . . . And that on which human labor has been spent, especially if it was a labor of love, and is apparent in the product, has one of the deepest possible claims to admiration. So the standard of cost, the most vulgar of all standards, is such only when it remains empty and abstract. Let thought wander back and consider the elements of value, and our appreciation, far from being prosaic and commercial, becomes poetic and real.

George Santayana

The Christian church is bound by its title deeds—the Bible—to be both a patron and a promoter of the arts. The God of the creation story in Genesis 1 is an artist who saw that “everything that he had made was good.” The church is thus committed to the belief that the creator delights in the beauty of the world as an expression of the beauty that is in himself.

Eric Newton and
William Neil

To feel beauty is a better thing than to understand how we come to feel it. To have imagination and taste, to love the best, to be carried by the contemplation of nature to a vivid faith in the ideal, all this is more, a great deal more, than any science can hope to be. The poets and philosophers who express this aesthetic experience and stimulate the same function in us by their example do a greater service to humanity and deserve higher honor than the discoverers of historical truth. . . . We have always an absolute ideal before us. . . . If we try to define that ideal, we shall hardly be able to say of it anything less noble and more definite than that it is the embodiment of an infinite good. For it is that incommunicable and illusive excellence that haunts every beautiful thing, and

like a star

beacons from the abode where the eternal are.

George Santayana

During periods when all previous works are disdained, genius languishes. No one can build on the void, and a civilization that breaks with the style at its disposal soon finds itself empty-

handed. . . . At Chartres as in Egypt, at Florence as in Babylon, art was begotten of life upon an art preceding it.

If, therefore, we in building our own habitations, take very great care to find out excellent and expert architects, and able artificers, we are certainly obliged to make use of still much greater care in the building of churches. And if in those we attend chiefly to convenience, in these we ought to have a regard to the dignity and grandeur of the Being there to be invoked and adored; who, being the supreme good, the highest perfection, it is very proper, that all things consecrated to [God] should be brought to the greatest perfection we are capable of. And indeed, if we consider this beautiful machine of the world, with how many wonderful ornaments it is filled, and how the heavens, by their continual revolutions, change the seasons according as nature requires. . . . we cannot doubt, but that the little temples we make ought to resemble this very great one, which, by [God's] immense goodness, was perfectly completed with one word; or imagine that we are not obliged to . . . build them in such a manner, and with such proportions, that all the parts together may convey a sweet harmony to the eyes of the beholders. . . . For which reason, although they are worthy to be much commended, who being guided by an exceeding good spirit, have already built temples to the supreme God, nevertheless, that they ought to remain with some little reprehension if they have not also endeavored to make them in the best and most noble form our condition will permit.

SOURCES

It is more important . . .

Hugh Morrison, *Louis Sullivan*
(New York: W.W. Norton & Co., 1935).

The architects of the twelfth . . .

Henry Adams, *Mont-Saint-Michel and Chartres*
(Boston: Houghton Mifflin, 1963).

Cost is practical value . . .

George Santayana, *The Sense of Beauty*
(New York: Dover Publications, Inc., 1955).

The Christian church is bound . . .

Eric Newton and William Neil, *2000 Years of Christian Art*
(London: Thames and London Limited, 1966).

To feel beauty is a better thing . . .

George Santayana, *The Sense of Beauty*
(New York: Dover Publications, Inc., 1955).

During periods when all . . .

Andre Malraux, *The Voices of Silence*
(Princeton: Princeton University Press, 1978).

If therefore, we in building . . .

Andrea Palladio, *The Four Books of Architecture*
(New York: Dover Publications, Inc., 1965).